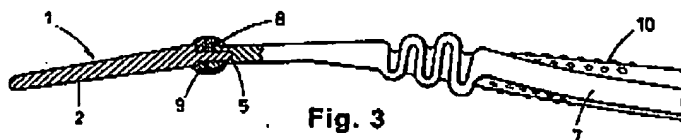


REMARKS

An Office Action was mailed on August 22, 2005. Claims 1-4, 7, 9-10 and 26-32 are pending. The indicated allowability of claims 9-10 has been withdrawn.

Claim 1 is rejected under 35 U.S.C. §102(b) as being anticipated by Kramer (U.S. Patent 6,066,282). Claims 1 and 7 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Brice (U.S. Patent 5,499,421). Claims 2-4 stand rejected under 35 U.S.C. §103(a) as being unpatentable over both Brice and Kramer in view of U.S. Patent No. 6,682,620 to Gartland et al. Claims 9 and 10 are newly rejected under 35 U.S.C. §103(a) as being unpatentable over Brice '421 in view of Dow.Com. Claims 26-32 are not rejected in view of any prior art.

With respect to all rejections based on Kramer, Applicant has positively recited that the two components are joined by a hot air weld (structure, not process) that is defined by the material forming the components, one of the components being elastomeric. This clearly takes the claimed invention out of the teaching of Kramer as the Kramer components are joined by an elastomeric overmold that is distinct from the joined components. Respectfully, the Examiner neglected Applicant's previous arguments that the elastomeric material (9) in Kramer is neither preformed nor a defined component of the toothbrush as illustrated in FIG. 3 of Kramer:



Instead, the elastomeric component (9) or mass (9) is injection molded around the joint of the first and second engagement parts (4,8) as stated in column 5, lines 45-55 of Kramer. The Examiner statement prior to the Conclusion section of the Office Action of August 22, 2005, that "Kramer teaches that the components may be preformed and then fused together by means of an elastomeric material" bears no relationship to the present claims. Instead, claim 1 and the claims dependent therefrom require that one of the preformed components is elastomeric as set forth in the presently amended claims. Furthermore, as noted above, the present claims require a joining weld defined by the components themselves. Accordingly, Applicant respectfully requests that the prior art rejections based on Kramer be withdrawn.

With respect to all rejections based on Brice, and similarly with respect to Kramer, Brice fails to teach a joining weld that joins two preformed components, the weld being formed from material of such components, at least one of such components being elastomeric. The Examiner has reiterated that the selection of an elastomeric material would have been an obvious engineering choice. However, again, Applicant respectfully submits that the Examiner neglected to consider Applicant's prior art arguments as to precisely why it would not have been obvious to use an elastomer and to arrive at the claimed invention in view of the Brice teaching. As noted previously, Brice only teaches the ultrasonic or vibration welding of preformed components as set forth in column 11, lines 34-57. Ultrasonic or vibration welding is commonly used for thermoplastic materials, and in particular toothbrush applications. However, it is generally not accepted in the trade to ultrasonically weld elastomers because an elastomer does not respond to ultrasonic or vibration energy in the same manner as a non-elastomeric thermoplastic material. Reference is made to the following chart from the DSM Engineering Plastics site (http://www.dsm.com/en_US/html/dep/welding.htm), which illustrates that welding thermoplastic elastomers by vibration welding, spin welding or ultrasonic welding is problematic:

Welding techniques	
Advantages	Disadvantages
Vibration Welding	
<ul style="list-style-type: none"> - cost-effective - short cycle times - large batch sizes possible to - melted polymer not exposed to open air - strong bond 	<ul style="list-style-type: none"> - welding thermoplastic elastomers is problematic - product is exposed to vibrations during welding - much flash is formed - 3D-contours cannot be welded
Spin Welding	
<ul style="list-style-type: none"> - efficient, simple process - simple equipment - short cycle times - large batch sizes possible - melted polymer not exposed to open air - strong bond 	<ul style="list-style-type: none"> - welding thermoplastic elastomers is problematic - only circular contours can be welded - 3D-contours cannot be welded - relative position of the parts cannot be adjusted
Ultrasonic Welding	
<ul style="list-style-type: none"> - cost-effective - very short cycle times - large batch sizes possible - melted polymer not exposed to open air 	<ul style="list-style-type: none"> - welding thermoplastic elastomers is problematic - product is exposed to vibrations during welding - restricted to small and medium-size parts
Hot-Plate Welding	
<ul style="list-style-type: none"> - cost-effective - large batch sizes possible - suited for soft materials (thermoplastic elastomers) - no electrical fields, no mechanical vibrations - strong bond 	<ul style="list-style-type: none"> - long cycle times - molten polymer exposed to open air (oxidation)
Laser Welding	
<ul style="list-style-type: none"> - short cycle times - no or hardly any flash is formed - ideally suited for miniaturization and very large products - thermoplastic elastomers can be welded - small heat-affected zone, built-in stresses not large - sensitive parts close to the weld not affected - no electrical fields, no mechanical vibrations - small series and mass production possible - strong bond 	<ul style="list-style-type: none"> - one part must be transparent, other part must be absorbent
Radio Frequency Welding (or Dielectric or High Frequency Welding)	
<ul style="list-style-type: none"> - suited for high polarity polymer films like PVC, EVA and polyurethane 	<ul style="list-style-type: none"> - only high polarity plastics can be welded; other plastics can only be welded using polar additives - not well suited for parts containing electromagnetic sensitive items (metal inserts)
Induction Welding (or Electromagnetic Welding)	
<ul style="list-style-type: none"> - short cycle times - 3D weld surfaces are possible - thermoplastic elastomers can be welded - can be used for very highly filled materials - welding process is reversible (repair, recycling) - tolerances on part dimensions not tight 	<ul style="list-style-type: none"> - electromagnetic welding gasket material is required - not well suited for parts containing electromagnetic sensitive items (metal inserts)
Resistance Welding	
<ul style="list-style-type: none"> - simple and fast process, minimal equipment requirements - very large products can be welded 	<ul style="list-style-type: none"> - heating wire remains in part after welding, adding to process costs and possibly reducing welding strength
Hot Gas Welding	
<ul style="list-style-type: none"> - suitable for very large products - suitable for field assembly, repair and prototypes - inexpensive, simple equipment, generally portable 	<ul style="list-style-type: none"> - weld quality is operator dependent - often a limited weld strength - slow process - weld remains visible

Simply put, the process defined in Brice would not lead one skilled in the art to arrive at the structure of the present invention as currently claimed. In other words, the Brice disclosure is limited to ultrasonic or vibration welding, and as such one skilled in the art would not look to Brice and would not be taught by Brice to use a hot-air joining weld to join preformed components, one of which is elastomeric. The structure embodied in by hot-air weld and the structure embodied an ultrasonic or vibration weld is distinctly different. Accordingly, one skilled in the art would not consider it obvious or warranted to substitute the material of Brice with an elastomeric material.

As for claims 9 and 10, Applicant respectfully submits that the Examiner has clearly failed to set forth a prima facie case of obviousness based on Brice and Dow.com. Claims 9 and 10 and the claims dependent therefrom set forth a toothbrush formed from at least two preformed toothbrush components, which are welded together to form a toothbrush; said preformed toothbrush components being selected from the group consisting of at least a part of a head, a neck and a handle, and combinations thereof, wherein said components are of different thermoplastic materials having melt flow rates which differ by more than 5 g/10 min. Examples of such materials are clearly set forth in the specification on pages 9-10, for example. In addition, the superior results achieved by using materials having the claimed characteristics form the entire basis of the present application. Thus, Applicant respectfully submits that it is disingenuous to assert that the Applicant has not set forth the materials or the advantages achieved by using such materials.

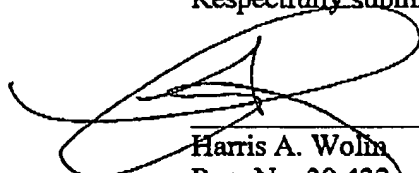
In addition, the Examiner admits that Brice clearly fails to teach different materials having different flow rates as claimed. However, to simply state that Dow makes two different grades of polypropylene, without any teaching or motivation whatsoever to use such materials in the claimed toothbrush, or in the Brice reference, could not be a more blatant application of hindsight reasoning, particularly in view of the specific teaching of Brice. The mere presence of particular materials in the public domain that "could" satisfy the claimed limitations cannot, without some specific and directive motivation, lead one skilled in the art to modify Brice to arrive at claimed limitation.

Finally, while the Applicant has previously observed on more than one occasion that the Examiner has failed to consider Applicant's previous arguments, as evidenced by a blanket reiteration of the Examiner's prior arguments, Applicant respectfully notes that the Examiner has failed to address any of the new claims 26-32, either on the Office Action Summary or in the body of the Office Action. Thus, the Examiner has not satisfied the duty set forth in MPEP §707.07, to provide a complete response with respect to all claims on the merits. As such, Applicant respectfully requests that any future Office Action on the merits, if any, be deemed non-final as the Office Action of August 22, 2005, is completely devoid of any mention or examination of all claims on the merits, and in particular claims 26-32 on the merits.

In view of the above amendments and remarks, it is believed that claims 1-4, 7, 9-10 and 26-32, consisting of independent claims 1 and 9 and the claims dependent therefrom, are in condition for allowance. Passage of this case to allowance is earnestly solicited. However, if for any reason the Examiner should consider this application not to be in condition for allowance, the Examiner is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged to Deposit Account No. 03-2455. Any overpayment made may be credited to Deposit Account No. 03-2455.

Respectfully submitted,



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